UNIVERSITI TEKNOLOGI MARA

AN INTELLIGENT MOBILE MULTI-INFORMATION SYSTEM (IMM) IN REAL-TIME DEPLOYMENT

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ABSTRACT

In this age of IT era especially in Malaysia, the presentation of any information to the general public is basically a standalone unit and confined specifically to a certain domain which is not able to be shared and enjoyed by all level of the population. Take for example in disbursing the most needed information for schools, colleges, universities including business sectors they are not fully exploited, although internet has provided the basic means. There are reasons which caused the slow reception of idea to benefit the general public to the internet. Thus a need for a back-up entity to support the disbursement of important information to the general public is timely needed.

Basically to limit the scope of this research a focus mainly to the advertising sector is chosen. However it is now unfortunate that this sector is predominantly captured by high level entity such as big Business to Business (B2B) enterprises. Hence, for any new upcoming Business to Consumer (B2C) enterprise especially the Small and Medium Entrepreneur (SME) it becomes a big hindrance to them. Thus to address such issue this research presents, a system known as An Intelligent Mobile Multi-Information (IMM) system in Real-Time is conceived. In real-time it means that the updating process of the materials and the disbursement of information are done in real-time in the quickest time using IT technique to be shown to the general public by easily accessible deployment on the public transportation system. The public transportation system is chosen for its ability to reach the public easily.

Briefly, the IMM system consists of two entities, the server which is stationary at the station and the second entity is the mobile vehicle, taxi, bus or train. The communication between server and clients is done solely on Wi-Fi 802.11 a/b/g/n technology specifications wirelessly depicting a Wireless Sensor Network technology.

The main advantage of IMM while it has the ability to quickly update its file and thus disburse it in real-time accordingly, it has enough security features built-in to beat hackers and intruders which may cause bad consequences if left unchecked. Since it is deployed in an affordable way it will help any new upcoming B2C including SME enterprises to find a mean of advertising its product effectively, cheaply and easily which many studies has shown that a television a-like presentation on strategically located and easily accessible advertisement system to the targeted general public can uplift and improve business profit, returns and return on investment (ROI).

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1.0 Introduction

The scenario of internet globally has gained fast acceptance. According to Internet World Stats (2009), there are about 1,802,330,457 internet users worldwide. Within it lies a vast application covering almost everything man needs. As noted by Forest, Lavoisy, Eurich, Jilles Van Gurp and Wilson (2009) the future internet applications on the socioeconomic scenario will definitely deploy on integration of various technologies such as Broadband Wireless (BW), Wireless Sensor and actuator Network (WSN) and Networked Embedded Devices (NED) and others. Hence it will become the truly enormous network with vast applications benefitting the world population.

1.1 Problem Background

The present scenario shows that the internet is predominantly diversifying from totally wired network to the wireless network. Although challenges in wireless technology are tremendous however a Wi-Fi Protocol Access (WPA) and Wired Equivalent Privacy (WEP) specific may provide a better security to Institute of Electrical and Electronics Engineers 802 network (Louis Zhang, 2007). Beside WEP, there are still other management protocols to overcome this weakness.

On the other hand, if one is to explore deep into the business world it is found that there are Business-To-Business (B2B), Business-to-Customer (B2C), giant enterprise and Small and Medium Entrepreneurs (SME). It is also realised that in a business world, the advertisement plays a major role in the success of its business.